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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HUYNH, SON P	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/164,427	AFSHARY ET AL.
	Examiner	Art Unit
	Son P Huynh	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7,9-12 and 25-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,9-12 and 25-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 1998* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-5, 7,9-12, 25-33 have been considered but are moot in view of the new ground(s) of rejection.

Upon rereading the McArthur's reference, McArthur teaches the universal client interface adapter as claimed since device interface receive the signal from client device such as camera, process the received signal and transmit the processed signal on local video channel to other device interfaces. The other device interfaces receive the processed signal and output to a respective device; McArthur further teaches frequency band used for local video channels reads on second portion and frequency band used for cable television channels reads on the first portion.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5,7, 25-29, 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over McArthur (US 5,805,806).

Regarding claim 1, McArthur discloses a way to implement a local area network (LAN) for PCs and televisions in the home environment. The network comprises multiple devices connected to one another using coaxial cable via device interfaces. The network also includes capability to distribute video generated by any PC or other video source in the network to any other PC or television in the network (see col. 4, lines 1-14). McArthur further discloses the frequency band from 50-750MHz is used for cable channels; frequency band 750-800MHz is used for remodulated, local video originating from PCs or other devices in the network (see col. 4, lines 15-55). The interface device receives signal generated by the respective device, process the received signal and transmits the processed signal to other interface device for processing and then outputting to a respective device (see figure 12, and col. 10, line 30+). Thus, McArthur teaches the devices read on a plurality of clients; the device interfaces read on a plurality of universal client interface adapter since each of the device interface is connected to a respective device, receives the video signal generated by the respective device and communicate with other interface devices via coaxial cable; frequency band used for standard cable television signal reads on the first portion; frequency band used for local video channels read on the second portion. McArthur further discloses the frequency band from 750-800 MHz is used for remodulated, local video originating from PCs or other devices in the network (see col. 4, lines 28-30). It is obvious that the

signals transmitted in local video channels are carrier modulated digital signals in order to improve data transmission efficiency.

Regarding claim 2, McArthur teaches at least one of the plurality of universal client interface adapters is integrated into a client of the cable LAN (see figure 1 or figure 12).

Regarding claim 3, McArthur teaches the cable LAN as discussed in the rejection of claim 1. McArthur further teaches the at least one carrier modulated digital signal is an in-home signal (video signal generated by PCs or other video sources and transmitted on local video channels- see col. 4, lines 28-55); and the coaxial cable is taped off a public cable network via jack 8 (see figures 1, 12 and col. 10, lines 45-48).

Regarding claim 4, McArthur teaches a cable LAN as discussed in the rejection of claim 3. Official Notice is taken that using a low pass filter coupled upstream of the in home signal to prevent signal generated locally within the network from leaving the network is well known in the art. Therefore, it is obvious to one of ordinary skill in the art to modify McArthur to incorporate a well-know feature in the art in order to block signal generated locally within the network from leaving the network, thereby reduce interfering between frequencies.

Regarding claim 5, McArthur in view of a well-known feature in the art teaches a cable LAN as discussed in the rejection of claim 4. It would have been obvious to one of

ordinary skill in the art that the low pass filter having a cut off frequency less than 1000MHz in order to block frequency 1000MHz or greater to get into the external network.

Regarding claim 7, McArthur discloses a cable LAN as discussed in the rejection of claim 1. Official Notice is taken that using a low pass filter coupled upstream of the in home signal to prevent signal generated locally within the network from leaving the network is well known in the art. Therefore, it is obvious to one of ordinary skill in the art to modify McArthur to incorporate a well-know feature in the art in order to block signal generated locally within the network from leaving the network, thereby reduce interfering between frequencies.

Regarding claim 25, McArthur discloses a frequency band from 50-750MHz is used for standard cable channels and a frequency band from 750-800MHz is used for remodulated, local video originating from PCs or other devices in the network. The device interface receives signal generated by respective device, processes and transmitted to another device interface for processing and outputting to a respective device (see figures 1, 12 and col. 4, line 15+). Apparently, McArthur teaches a method for communicating data between a first universal client interface adapter and a second universal client interface adapter coupled by coaxial cable 15, the method comprising the steps of:

receiving data in the universal client interface adapter from a client;

processing the data within the first client interface adapter into a modulated signal having a signal operating frequency that is greater than a signal cut-off frequency defined for conventional coaxial cable service (frequency band for local video channels is greater than frequency band for cable channels); and

communicating the modulated signal from the first universal client interface adapter to the second universal client interface adapter through coaxial cable 15. It would have been obvious to one of ordinary skill in the art that the data generated by the device is digital data in order to improve data transmission efficiency.

Regarding claim 26, McArthur discloses in response to the person's input via the wireless keyboard 222, the NTSC video output by PC 16 is modulated onto channel 2, where it is received by the tuner in TV interface 34 and displayed on television 18 (see col. 11, lines 27-42) and the frequency band used for local video channels is greater the frequency band used for cable channels (see col. 4, line 28+). Apparently, the digitized data is modulated into an analog form; the modulated data is converted into an analog signal having an intermediate frequency; the intermediate frequency is increased to a frequency that is greater than the data operating frequency (channel SN 2); and the power is amplified for transmitting and displaying the signal the signal on the television 18.

Regarding claim 27, McArthur discloses the frequency range from 750-800MHz is used to implement eight local video channels. A larger or smaller number of local channels

can be implemented if desire (see col. 4, lines 61+). Therefore, McArthur teaches the modulated digital signal operating frequency is greater than appropriately 450MHz.

Regarding claim 28, the limitations of a cable LAN as claimed correspond to the limitations of method as claimed in claim 25 and are analyzed as discussed in the rejection of claim 25.

Regarding claim 29, McArthur discloses the frequency range from 750-800MHz is used to implement eight local video channels. A larger or smaller number of local channels can be implemented if desire (see col. 4, lines 61+). Therefore, McArthur teaches the modulated digital signal operating frequency is greater than appropriately 450MHz.

Regarding claim 32, McArthur teaches the modulated digital signal has a bandwidth of at least 5MHz (see col. 4, line 28+).

Regarding claim 33, McArthur teaches the normal coaxial cable system transmits signals external to the cable LAN (see figures 1, 12).

4. Claims 9-12, 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McArthur (US 5,805,806) as applied to claim 1 above, and in view of Terry (US 5,499,047).

Regarding claim 9, McArthur discloses a cable LAN as discussed in the rejection of claim 1. McArthur further discloses a lager number of local channels can be implemented if desire (see col. 4, lines 65-67). However, McArthur does not explicitly disclose the modulated digital signal operating frequency is greater than approximately 950 MHz.

Terry discloses the "signal operating frequency" range from 1150 to 1350 MHz (see col. 5, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the "operating frequency" greater than approximately 950 MHz in order to increase the bandwidth thereby allowing more data transmitted in the cable.

Regarding claim 10, McArthur in view of Terry teaches a cable LAN as discussed in the rejection of claim 9. Terry further teaches the signal operating frequency is between 950 MHz and 2000MHz (see col. 5, lines 55-60).

Regarding claim 11, Terry teaches the "signal operating frequency" is range 1150-1350 MHz as discussed in the rejection of claim 10 which is approximately 1300 MHz.

Regarding claim 12, Terry teaches the "signal operating frequency" has a bandwidth of at least 5 MHz (see figure 2 or 3).

Regarding claim 30, McArthur discloses a cable LAN as discussed in the rejection of claim 28. McArthur further discloses a lager number of local channels can be implemented if desire (see col. 4, lines 65-67). However, McArthur does not explicitly disclose the modulated digital signal operating frequency is greater than approximately 950 MHz.

Terry discloses the "signal operating frequency" range from 1150 to 1350 MHz (see col. 5, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the "operating frequency" greater than approximately 950 MHz in order to increase the bandwidth thereby allowing more data transmitted in the cable.

Regarding claim 31, McArthur discloses a cable LAN as discussed in the rejection of claim 28. McArthur further discloses a lager number of local channels can be implemented if desire (see col. 4, lines 65-67). However, McArthur does not explicitly disclose the modulated digital signal operating frequency is approximately 1300 MHz.

Terry discloses the "signal operating frequency" range from 1150 to 1350 MHz (see col. 5, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McArthur to utilize the "operating

frequency" approximately 1300 MHz in order to increase the bandwidth thereby allowing more data transmitted in the cable.

5. Claims 1-5, 7, 25, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, Jr. (US 6,202,211) and in view of McArthur (US 5,805,806).

Regarding claim 1, Williams discloses a cable LAN comprises a plurality of set top box 22, each of the set top box connected to multiple devices and a server 20 using coaxial cable 65. The set top box receives signal generated locally from respective device such as camera or microphone. A/V mixer in set top box combines audio and video signal received from respective camera and microphone and outputs the mixed signal to modulator 144, channel modulator 144 modulates the mixed signal and transmits them to the server. The demodulator 147 demodulates signal received from server and outputs to Mux 153 and then outputs to a TV (see figures 5 and 23). Williams further discloses set top box transmits modulated data to server 20 to maintain a video teleconference (see col. 11, lines 33-37). It is obvious that the set top box may communicates with other set top box in the LAN in order to send modulated signal to other set top box. Therefore, Williams teaches TV, camera, etc. read on a plurality of clients; a plurality of set top box 22 read on a plurality of universal client interface adapters; coaxial cable 65 coupled between a pair of universal client interface adapters; and the signals generated locally read on the carrier modulated digital signals. Williams further discloses the set top box also receives television signal from external network

via external coax 64 (see figure 5). Apparently, at least a first portion (portion of operating frequency spectrum in the coaxial cable used for external television signal); and a second portion (portion of operating frequency spectrum used for signal generated locally within the network). However, Williams does not specifically disclose the second portion operating at a frequency greater than a signal cut-off frequency defined for external television signal.

McArthur teaches frequency band from 50-750MHz is used for standard cable television signals. The frequency band from 750-800MHz is used for remodulated local video originating from PCs or other devices in the network (see col. 4, line 28). Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to incorporate the feature as taught by McArthur in order to prevent interfering between signal generated locally and signal received from external network.

Regarding claim 2, Williams teaches the set top box 22 is integrated into a client of the cable LAN (see figure 5).

Regarding claim 3, Williams teaches the at least one carrier modulated digital is an in home signal (signal generated locally within the in home network) and the coaxial cable is tapped off of a public cable network (external network- see figures 5 and 23).

Regarding claim 4, Williams discloses programmable channel filter 62 is used to prevent signals generated locally within the network from leaving the network (see col. 7, line 25+ and figure 5). It is obvious to one of ordinary skill in the art that the programmable channel filter comprises a low pass filter in order to prevent signal generated locally within the network from leaving the network.

Regarding claim 5, Williams discloses cut-off frequency of programmable channel filter can be controlled by user or server 20 (see col. 17, line 40+). It is obvious to one of ordinary skill in the art to provide a low pass filter having a cut off frequency less than 1000 MHz in order to prevent frequency of 1000MHz or greater from leaving the local network.

Regarding claim 7, Williams teaches the at least one carrier modulated signal is an in-home signal (signal generated locally within the in home network-see figure 23). Williams further discloses programmable channel filter 62 is coupled upstream of the in home signal to a public cable network (external network, and the signal carrier modulated digital signal is generated downstream – see figure 5); the channel filter 62 is used to prevent signals generated locally within the network from leaving the network (see col. 7, line 25+ and figure 5). It is obvious to one of ordinary skill in the art that the programmable channel filter comprises a low pass filter in order to prevent signal generated locally within the network from leaving the network.

Regarding claim 25, Williams teaches a LAN comprises plurality of set top box 22. A coaxial cable is used to connect between the plurality of set top box 22. Channel modulator modulates signal generated locally within the network via mixer 150 and transmits the modulated signal to server 20. Demodulator 147 demodulates signal received from server 20 and outputs the demodulated signal to TV set via Switch 126 (see figures 5, 23). Williams further discloses set top box transmits modulated data to server 20 to maintain a video teleconference (see col. 11, lines 33-37). It is obvious that the set top box may communicates with other set top box in the LAN in order to send modulated signal to other set top box. In addition, Williams discloses the set top box receives video directly from a video camera 54 in a format such as NTSC, PAL, or any other conventional format (see col. 6, line 28+). It is obvious that to use a digital format in order to improve data transmission efficiency. Therefore, Williams teaches a method for communicating data between a first universal client interface adapter (set top box 22) and a second universal client interface adapter (another set top box 22) coupled by a coaxial cable 65, the method comprising:

receiving digitized data in the first universal client interface adapter from a client;

processing the digitized data within the first universal client interface adapter into a carrier modulated digital signal having an operating frequency (modulates data generated locally within the network; and communicating the carrier modulated digital signal from the first client universal adapter to the second universal client interface adapter though the coaxial cable (video teleconference). However, Williams does not

specifically disclose the carrier modulated digital signal having a signal operating frequency that is greater than a signal cut off frequency defined for conventional coaxial cable service.

McArthur teaches frequency band from 50-750MHz is used for standard cable television signals. The frequency band from 750-800MHz is used for remodulated local video originating from PCs or other devices in the network (see col. 4, line 28). Therefore, it would have been obvious to one of ordinary skill in the art to modify Williams to incorporate the feature as taught by McArthur in order to prevent interfering between signal generated locally and signal received from external network.

Regarding claim 27, McArthur teaches the carrier modulated digital signal operating frequency is greater than appropriately 450 MHz (see col. 4, line 28+).

Regarding claim 28, the limitations of the cable LAN as claimed correspond to the limitations of the method as claimed in claim 25 and are analyzed as discussed with respect to the rejection of claim 25.

Regarding claim 29, McArthur teaches the carrier modulated digital signal operating frequency is greater than appropriately 450 MHz (see col. 4, line 28+).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shahar et al. (US 6,112,232) teaches data communication device for CATV networks.

Flohr (US 5,374,952) teaches videoconferencing system.

Gerszberg et al. (US 6,542,500) teaches network server platform for a hybrid coaxial/twisted pair local loop network service architecture.

Abraham (US 5,625,863) teaches video distribution system using in wall wiring.
EP (0,806,737) teaches in system programming with two wire interface.

WO (94/19910) teaches universal TV interface and related method.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 703-306-0377.

ANDREW FAILE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Son P. Huynh
July 28, 2003